

A. C. CLASSIFICATION OF SUBJECT MATTER IPC / C12N9/10 C12N15/11 C12N15/52 G01N33/50 A61K48/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C12N		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, SEQUENCE SEARCH, EMBL		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SLACK A ET AL: "ANTISENSE MBD2 GENE THERAPY INHIBITS TUMORIGENESIS" JOURNAL OF GENE MEDICINE, WILEY,, US, vol. 4, no. 4, 17 May 2002 (2002-05-17), pages 381-389, XP008009438 ISSN: 1099-498X the whole document <div style="text-align: center; margin-top: 20px;"> ---- -/--- </div>	1-21
<div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex. </div>		
* Special categories of cited documents :		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>*Z* document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search <div style="text-align: center; font-size: 1.2em;">30 September 2003</div>		Date of mailing of the international search report <div style="text-align: center; font-size: 1.2em;">23/10/2003</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer <div style="text-align: center; font-size: 1.2em;">Heder, A</div>

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	BHATTACHARYA SK ET AL: "A mammalian protein with specific demethylase activity for mCpG DNA" NATURE, MACMILLAN JOURNALS LTD. LONDON, GB, vol. 397, 18 February 1999 (1999-02-18), pages 579-583, XP002097746 ISSN: 0028-0836 -& DATABASE EMBL 'Online! EMBL; 28 October 1998 (1998-10-28) retrieved from EMBL Database accession no. AF072242 XP002256127 abstract	1-21
Y	SZYF M: "THE DNA METHYLATION MACHINERY AS A THERAPEUTIC TARGET" CURRENT DRUG TARGETS, BENTHAM SCIENCE PUBLISHER,, US, vol. 1, no. 1, July 2000 (2000-07), pages 101-118, XP001122812 ISSN: 1389-4501 the whole document	1-21
Y	WO 99 24583 A (BHATTACHARYA SANJOY ;RAMCHANDANI SHYAM (CA); UNIV MCGILL (CA); SZY) 20 May 1999 (1999-05-20) the whole document	1-21
E	WO 03 074060 A (BIGEY PASCAL ;SCHERMAN DANIEL (FR); CENTRE NAT RECH SCIENT (FR); I) 12 September 2003 (2003-09-12) the whole document	1-21

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: Claims 1-21 (all partially)

Oligonucleotide inhibitor of SEQ ID NO: 5, oligonucleotide inhibitors, and analogues thereof of less than about 100 nucleotides in length and comprising at least 7 consecutive nucleotides of SEQ ID NO: 5, and uses thereof

Invention 2: Claims 1-21 (all partially)

Oligonucleotide inhibitor of SEQ ID NO: 6, oligonucleotide inhibitors, and analogues thereof of less than about 100 nucleotides in length and comprising at least 7 consecutive nucleotides of SEQ ID NO: 6, and uses thereof

Invention 3: Claims 1-21 (all partially)

Oligonucleotide inhibitor of SEQ ID NO: 7, oligonucleotide inhibitors, and analogues thereof of less than about 100 nucleotides in length and comprising at least 7 consecutive nucleotides of SEQ ID NO: 7, and uses thereof

Invention 4: Claims 1-21 (all partially)

Oligonucleotide inhibitor of SEQ ID NO: 8, oligonucleotide inhibitors, and analogues thereof of less than about 100 nucleotides in length and comprising at least 7 consecutive nucleotides of SEQ ID NO: 8, and uses thereof

Invention 5: Claims 1-21 (all partially)

Oligonucleotide inhibitor of SEQ ID NO: 9, oligonucleotide inhibitors, and analogues thereof of less than about 100 nucleotides in length and comprising at least 7 consecutive nucleotides of SEQ ID NO: 9, and uses thereof

Invention 6: Claims 1-21 (all partially)

Oligonucleotide inhibitor of SEQ ID NO: 10, oligonucleotide inhibitors, and analogues thereof of less than about 100 nucleotides in length and comprising at least 7 consecutive nucleotides of SEQ ID NO: 10, and uses thereof

Invention 7: Claims 1-21 (all partially)

Oligonucleotide inhibitor of SEQ ID NO: 11 or 12, oligonucleotide inhibitors, and analogues thereof of less

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

than about 100 nucleotides in length and comprising at least 7 consecutive nucleotides of SEQ ID NO: 11 or 12, and uses thereof

Invention 8: Claims 1-4, 6-21 (all partially)

Oligonucleotide inhibitors, or analogues thereof, comprising from about 7 to about 100 nucleotides complementary to a mammalian MBD2/demethylase mRNA, and inhibiting the expression of a mammalian MBD2/demethylase gene, excluding the oligonucleotides of inventions 1-7, and uses thereof

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA 03/00884

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 12-21 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claims 1-4 relate to a oligonucleotide defined by reference to a desirable characteristic or property, namely inhibition of expression of a mammalian MBD2/demethylase gene.

The claims cover all oligonucleotides having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT for only a very limited number of such oligonucleotides. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the oligonucleotide by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible.

Present claim 5 relates to an extremely large number of possible oligonucleotides. Support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the oligonucleotides claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the oligonucleotides of SEQ ID NO: 5, 6, 7, 8, 9, 10, 11, and 12.

Support of true technical nature is not to be found in the application for SEQ ID NO: 5 and 6.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9924583	A	20-05-1999	AU 1138699 A	31-05-1999
			CA 2309361 A1	20-05-1999
			WO 9924583 A1	20-05-1999
			EP 1029058 A1	23-08-2000
			JP 2001522607 T	20-11-2001
WO 03074060	A	12-09-2003	FR 2836831 A1	12-09-2003
			WO 03074060 A2	12-09-2003